Complete Summary

GUIDELINE TITLE

Gender-specific practice guidelines for coronary artery bypass surgery.

BIBLIOGRAPHIC SOURCE(S)

Society of Thoracic Surgeons (STS). Gender-specific practice guidelines for coronary artery bypass surgery. Chicago (IL): Society of Thoracic Surgeons (STS); 2004. 20 p. [48 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Conditions requiring CABG (coronary artery bypass graft) surgery

GUIDELINE CATEGORY

Management

CLINICAL SPECIALTY

Anesthesiology
Cardiology
Thoracic Surgery

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

- To assist physicians and other health care providers in clinical decision-making by describing a range of generally acceptable approaches for the diagnosis, management, or prevention of specific diseases or conditions
- To present gender-specific practice guidelines for coronary artery bypass surgery (CABG)

TARGET POPULATION

Female patients requiring CABG (coronary artery bypass graft) surgery

INTERVENTIONS AND PRACTICES CONSIDERED

1. Use of internal mammary artery in CABG (coronary artery bypass graft surgery)
2. Management of hyperglycemia
3. Management of anemia
4. Off-pump coronary artery bypass graft surgery
5. Management of anesthetic and sedation medications
6. Optimization of thyroxine treatment
7. Preoperative hormone replacement therapy (HRT) (not recommended)

MAJOR OUTCOMES CONSIDERED

Morbidity and mortality associated with coronary artery bypass surgery (CABG)

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Level of Evidence

Level A: Data derived from multiple randomized clinical trials

Level B: Data derived from a single randomized trial or from nonrandomized trials

Level C: Consensus expert opinion

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Classification of Recommendations

Class I: Conditions for which there is evidence and/or general agreement that a given procedure is useful and effective.

Class II: Conditions for which there is conflicting evidence and/or a divergence of opinion about the usefulness/efficacy of a procedure.

- II.a.: Weight of evidence favors usefulness/efficacy
- II.b.: Usefulness/efficacy is less well established by evidence

Class III: Conditions for which there is evidence and/or general agreement that the procedure is not useful/effective.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The levels of evidence (A-C) and classification of recommendations (I-III) are defined at the end of the "Major Recommendations" field.

1. Use of the Internal Mammary Artery
    - Guideline Panel Conclusion: Use of the internal mammary artery is underutilized in women undergoing coronary artery bypass graft (CABG) procedures. The internal mammary artery confers a protective effect that is associated with a significant reduction in CABG mortality as compared to surgical revascularization with venous conduits alone.
    - Ideal Clinical Practice: Whenever it is technically possible, at least one internal mammary artery is used in every coronary artery bypass graft (CABG) procedure to bypass a stenotic coronary artery. Class I, Level B
2. Management of Hyperglycemia
    - Guideline Panel Conclusion: Perioperative blood glucose levels > 150 mg/dl are associated with increased operative morbidity and mortality.
    - Ideal Clinical Practice: Perioperative blood glucose levels are maintained in the range of 100-150 mg/dl. Class I, Level B
3. Management of Anemia
    - Guideline Panel Conclusion: Intraoperative hematocrit levels below 22% are associated with an increased incidence of adverse events.
    - Ideal Clinical Practice: Efforts are made to ensure adequate intraoperative hematocrit levels. Class IIa, Level B
4. Use of Off-Pump CABG (off-pump coronary artery bypass [OPCAB])
    - Guideline Panel Conclusion: There is no evidence to firmly establish the superiority of OPCAB over conventional CABG in the female patient
    - Ideal Clinical Practice: The indications for off-pump coronary artery bypass surgery are the same for women as for men. Class IIa, Level B
5. Adjustment of anesthetic and sedation medications
    - Guideline Panel Conclusion: Failure to account for body size when administering anesthetic and sedative drugs may over-medicate smaller patients.
    - Ideal Clinical Practice: Anesthetic management and sedative utilization during the perioperative period are tailored to body size. Class IIb, Level C
6. Optimization of thyroxine treatment for women with hypothyroidism
    - Guideline Panel Conclusion: Low intraoperative levels of levothyroxine and free thyroxin are associated with a high CABG mortality in hypothyroid women.

- Ideal Clinical Practice: Hypothyroid women undergoing CABG are maintained in a euthyroid state during surgery. Class IIa, Level C

7. Consideration of preoperative hormone replacement therapy (HRT)
    - Guideline Panel Conclusion: HRT is linked to several complications including serious thromboembolic events. Its use in CABG procedures is of questionable value.
    - Ideal Clinical Practice: Hormone replacement therapy is not used for postmenopausal women undergoing CABG. Class III, Level B

Definitions:

Level of Evidence

Level A: Data derived from multiple randomized clinical trials

Level B: Data derived from a single randomized trial or from nonrandomized trials

Level C: Consensus expert opinion

Classification of Recommendations

Class I: Conditions for which there is evidence and/or general agreement that a given procedure is useful and effective.

Class II: Conditions for which there is conflicting evidence and/or a divergence of opinion about the usefulness/efficacy of a procedure.

II.a. Weight of evidence favors usefulness/efficacy
II.b. Usefulness/efficacy is less well established by evidence

Class III: Conditions for which there is evidence and/or general agreement that the procedure is not useful/effective.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is specifically stated for each recommendation (see 'Major Recommendations' field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate perioperative management to improve coronary artery bypass graft (CABG) outcomes, particularly in women

POTENTIAL HARMS

Not stated

CONTRAINDICATIONS

CONTRAINDICATIONS

The use of the internal mammary artery should be avoided when confronted with a soft, friable sternum that predisposes to sternal dehiscence.

QUALIFYING STATEMENTS

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These guidelines should not be considered inclusive of all proper methods of care or exclusive of other methods of care reasonably directed at obtaining the same results. Moreover, these guidelines are subject to change over time, without notice. The ultimate judgment regarding the care of a particular patient must be made by the physician in light of the individual circumstances presented by the patient.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2004

GUIDELINE DEVELOPER(S)

Society of Thoracic Surgeons - Medical Specialty Society

SOURCE(S) OF FUNDING

Society of Thoracic Surgeons

GUIDELINE COMMITTEE

Workforce on Evidence-Based Surgery

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Society of Thoracic Surgeons Web site.

Print copies: Available from The Society of Thoracic Surgeons, 633 N. Saint Clair St., Suite 2320, Chicago, IL, USA 60611-3658

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on March 25, 2005. The information was verified by the guideline developer on April 18, 2005.

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